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ABSTRACT

A discussion of pre-historic (i.e., preliterate) language looks at the processes of affixation and inflection in the context of two conflicting theories on the complexity of those languages. The traditional view holds that the grammar used by early Indo-Europeans was at least as complex and abstract as that of any modern educated and literate speaker. The other perspective is that the early peoples are unlikely to have been very different in language and thought from present-day non-literate speakers and very different from contemporary literate language users. The two theories are outlined and discussed. It is concluded that given the absence of direct evidence for pre-historical stages and changes in Indo-European languages, the conflict will have to be resolved through: (1) an appraisal of the validity of the traditional technique of historical linguistics; (2) appraisal of the validity of the studies and descriptions of non-literate users of contemporary languages; and (3) evaluation of the latter theory's assertion that characterizations of contemporary individuals and societies are proper data for the understanding of early man. (MSE)

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AFFIXATION AND INFLECTION IN PRE-HISTORIC INDO-EUROPEAN

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THE CONFLICT

There are two very different approaches to the characterization of the language and thought of the speakers of pre-historic (that is, pre-literate) languages.

On the one hand, there is the view dominant in traditional historical linguistics to the effect that the grammar employed by early Indo-Europeans possessed a complexity and abstractness equal to (if not greater than) that of any modern educated and literate speaker. Authorities of great intelligence and breadth of linguistic knowledge such as Locke, Muller, Humboldt, Saussure, and Sapir present a continuous and univocal view that full linguistic competence had been attained among quite primitive peoples long before the introduction of writing.

On the other hand, we have the view, prominently expressed by Sir James Frazer, to the effect that those early peoples are unlikely to have been very different in language or thought from present-day non-literate speakers and quite different from contemporary literate language users.

AFFIXATION AND INFLECTION

My examination of this conflict will focus on two major processes, affixation and inflection, which have been of general concern among historians of the most widely studied of pre-literate languages, Indo-European.

Affixation is the process by which previously independent radical elements are combined into a lexical complex containing a single radical element, which forms the basis of the reference of

the complex, and one or more subjoined elements (i.e., affixes) which serve to modify the reference of the radical. As examples, the French adverbial suffix **-ment** originated as an independent element, **mensa** meaning 'mind' while its English counterpart, **-ly**, comes from an independent element, (**ligo** in Old Frisian) meaning 'body'. An interesting case of ongoing affixation is seen in Chinese, where the word **guo**, 'over, across' as in "qing zou guo i" 'please walk over here', has only recently become an aspect marker, as in "ta qu-guo Beijing", 'he has been to Beijing' (Chu, 1987, p. 211).

Inflection is the process by which an element having extra-linguistic, real-world reference comes to have a purely abstract grammatical reference (referential terminations which Scholes and Willis, 1987a, 1987b, have labeled as extensional and intensional, respectively). The two examples of adverbial formations above illustrate this process: forms originally referring to real-world phenomena (minds and bodies) come to mean just 'adverb' - a meaning that is entirely confined to the grammar in which it functions.

Inflection is not limited to affixation. For example, the word of has in many cases lost its former extensional reference of 'coming from' (as in **the word of god**) and now carries only the intensional function of 'genitive.'

As a general feature of language development, inflection is the process by which forms take on grammatical (syntactic) functional status. It need not, then, involve any overt forms, but applies to all cases in which labels for objects, actions, and properties take on part-of-speech functions within a grammar, as

when uninflected labels such as **men** and **talk** are grammaticized by such overt inflectional markers as article and tense in **the men talked** or covertly inflected as in **men talk**.

THE DOMINANT VIEW

An excellent summary of the traditional view of the history and nature of affixation and inflection in Indo-European is provided in Louis Gray's Foundations of language of 1939. Gray notes (pp 150-152),

> "In Indo-European, as in many other linguistic families, historical evidence shows that a word must consist of at least two parts: base and inflexion (also termed ... root, the element containing the general meaning of the word; and morpheme, the element which gives definite form to that meaning).
>
> "The meaning of the base is general and vague; it is neither verb nor noun nor any other part of speech. To become one, it must receive, in the majority of languages, an inflexion, an element also meaningless in itself, at least in the historical period and so far back as our powers of reconstruction go.
>
> "This brings us to the problem of the origin of inflexion ... there seems to be some evidence, especially from the so-called primitive languages, that inflexional elements are mutilated survivals of words once independent, but later agglutinated to the base." (Gray, 1939, 150-152).

While such pairs as **manly** vs **quickly** and expressions such as

in the kitchen vs **in the first place** clearly indicate that affixation and inflection are distinct processes (**-ly** and **in** retain their extensional reference in one, but not the other case) these are not always separately considered in discussions of the history of Indo-European languages. A brief survey of the highlights of that discussion are presented below.

Concern with affixation and inflection (what Charles F. Hockett termed "the agglutinative fallacy" in his preface to the 1979 edition of William Dwight Whitney's Life and Growth of Language) may be traced to John Locke's influential Essay on Human Understanding of 1690. In an oft-quoted passage (pp. 265,266 of the 1856 edition) Locke notes, "... how great a dependence our words have on common sensible ideas; and how those, which are made use of to stand for actions and notions quite removed from sense, have their rise from thence, and from obvious sensible ideas are transferred to more abstruse significations, and made to stand for ideas that come not under our senses." What Locke has in mind here is the process by which a formerly concrete sensible term such as **hand** turns up in words such as **comprehend**, transferring its former physical meaning of manual grasping to mental understanding.

Locke's thesis, concerned with a progression from concrete to abstract reference, is developed into a full theory of the origin of Indo-European morphemes by Frederick Max Muller in his published lectures of 1864. Muller asserts that all words were originally monosyllabic, monomorphemic forms of concrete reference. Radicals must, for Muller, have one of a limited number of phonetic shapes, and any contemporary words violating such shapes must necessarily

have developed as agglutinated forms. For example, the modern English word **strange** must be an agglutinated form since its initial consonant cluster is not permitted under Muller's rules of morpheme structure. As it turns out, he is correct in this case and the initial **s** of **strange** can be equated with the **es** of **estrange** and to the **ex** of **extra** and **exterior** and to an original autonomous morpheme meaning 'outside'.

By 1875 Whitney was able to assert that the claim of monosyllabic root origin was "a doctrine held by most students of language; the dissidents are few, and have nothing to say, in defense of their unbelief." (Whitney, 1979, p. 199).

While Muller (and others such as Schlegel and Bopp, who saw language as an organic entity able to alter itself - see Aarsleff, 1982; Sampson, 1980; Manchester, 1985, for expositions of this view) attended largely to the formal process of affixation, Wilhelm von Humboldt (Humboldt, 1836) was more concerned with the mental process of language users by means of which forms were inflected. Inflection, for Humboldt, meant the fusion onto or into a radical word of affixes which have no meaning in themselves beyond designating the syntactic function of the inflected element. Further, Humboldt believed that inflection was a natural process in that it mirrored thought (i.e., that one's thoughts may be seen as labels of phenomena that are then assigned a functional property within a system of conceptualization).

Maintaining Humboldt's interest in the relationship between affixation and inflection, Ferdinand de Saussure held that the mental process of inflection precedes the physical process of

affixation - that forms lose their extensional (extra-linguistic) reference before they lose their phonetic autonomy (Saussure, 1915). For Saussure, then, the form **ligo** would have had, in certain contexts, to have lost its extensional reference to shape and have taken on the purely intensional reference as adverbial marker before it could be reduced to the suffixed **ly**. This view was countered by Edward Sapir, who held that phonetic changes precede mental ones, and saw word order and stress as the "primary methods for the expression of all syntactic relations" (Sapir, 1921, 113). Sapir was apparently unaware of (at least he makes no mention of) the fact that his thesis was debunked much earlier by Hermann Paul (Paul, 1890) who noted that the same ordering and prosodic facts that accompany affixation also apply in many cases where affixation does not occur. (Compare, for example, **He has a manly grace** and **He has a cat-like grace**) To his credit, however, Sapir does note that inflection is not unique to affixation and that such "free forms" as **of** are often of a purely grammatical function in contemporary language.

While these authorities argued over the precidence of affixation and inflection, all were in agreement that both processes took place in pre-literate times (while, of course, continuing into the present time); that is, that both affixation and inflection are linguistic processes commensurate with entirely oral language.

To summarize, in traditional work on the development of Indo-European languages, scholars have recognized two processes: a physical agglutination of previously autonomous lexical elements

into lexical (or phrasal) complexes consisting of a base and one or more affixes; and a mental process whereby previously extensional elements take on intensional reference. Both processes are generally assumed to have occured, in the main, in pre-historic (i.e., pre-literate) ages.

CONTEMPORARY EVIDENCE FOR AFFIXATION AND INFLECTION

In the preface to The Golden Bough James G. Frazer (Frazer, 1890) writes, "... the primitive Aryan, in all that regards his mental fibre and texture, is not extinct. He is amongst us to this day. The great intellectual and moral forces which have revolutionised the educated world have scarcely affected the peasant. In his inmost beliefs he is what his forefathers were in the days when forest trees still grew and squirrels played on the ground where Rome and London stand today."

More specific to our present concerns, Frazer is clear in his understanding that the causal factor in his equation of contemporary peasantry with primitive man is literacy. He notes (in that same preface), "Two or three generations of literature may do more to change thought than two or three thousand years of traditional life. But the mass of the people who do not read books remain unaffected by the mental revolution wrought by literature;..."

Following Frazer's suggestion, evidence for the pre-history of the grammar of Indo-European speakers can be sought from contemporary sources - in this case, from "the mass of the people who do not read"; that is, from pre-literate children and non-literate adults.

The ontogenetic parallel with early Indo-Europeans is well recognized. I.J. Gelb, for example, notes, "It has often been observed that the mental attitudes of infants and children sometimes resemble those of societies on the most primitive basis. One of the most important points of similarity is the tendency toward concrete specification." (Gelb, 1952, 21-22).

As to the ontogeny of affixation, there are numerous studies and observations showing that pre-school children can form plurals and past tenses of real as well as nonsense stems (e.g. **wugs, wugged**). Such data are clear in their indication that children are able to creatively produce overtly affixed, inflected forms of nouns and verbs. This behavior does not, however, show that such forms are conceptualized by the child as lexical complexes containing radical and affixed elements - they only show (or better, prove) that children can do analogy. Having, in their mental store, a large array of such pairs as **dog/dogs** and **beg/begged** their skills in such tests can be accounted for quite well by claiming their responses to be attained by such thought processes as 'dog is to dogs as wug is to wugs.' Given the adequacy of the analogical process to explain this behavior, positing a knowledge of affixation is neither necessary nor motivated.

Inflection, whereby certain forms come to have a purely intensional reference, does not appear in language acquisition until after the age of five. While pre-school children show ability to deal with the concrete, extensional reference of elements, they show incapability in dealing with homophonous intensional terms. For example, plural is mastered long before phonetically identical

possessive and third person singular, concrete reference of words such as **sweet** (i.e., as a taste) is known years before the more metaphorical reference (i.e., as a feature of personality), and purely intensional elements such as articles and the subject noun phrase marker of passives are not functional components of a child's grammar until late stages (ages 9 to 11) of the acquisition process. See Palermo and Molfese (1972) for a summary review of linguistic limitations in pre-school children.

However, to show that affixation and inflection are rather late in the acquisition of language by children does not impact in any way on the question of their existence in pre-historical stages of language. The controversial and potentially important aspect of this inspection of ontogeny is the body of evidence to the effect that such linguistic developments are a function not of maturation but of the attainment and use of literacy.

The proper data, then, for an evaluation of Frazer's view are studies comparing the linguistic and cognitive competence of contemporary adult literate and non-literate speakers.

Fortunately, there is now a sizeable and growing body of research in this area. In their work with reading and non-reading children and adults Scholes and Willis (In press b; 1987a; 1987b) report that while 3rd grade children who read well can analyse words into **stems and affixes** and utilize intensional morphemes in their comprehension of spoken sentences, neither adult illiterates nor 3rd graders who are poor readers can perform these tasks.

Two examples of the behaviors of literate and non-literate speakers of English will illustrate these general findings. If

readers are asked what smaller word is inside the word **telephoning**, they respond with the morphological stem, **phone**; if illiterate adults are asked the same question, their response (if there is one beyond a blank stare) tends to reflect a purely syllabic, non-morphological analysis - e.g., **tell**. Asked, "If the boys watching the girls play ball, who plays ball?" and "If the boys watch the girls play ball, who plays ball?", literate speakers invariably respond with "boys" in the first case and "girls" in the second; while adult illiterates will say "girls" in response to both questions. Scholes and Willis' interpretation of these findings is that, lacking an ability to process intensional morphology (i.e., having no inflectional competence) the illiterates' strategy is based on syllables in the word analysis case and the order and adjacency of extensional terms in the sentence comprehension task.

The implications of such findings for an understanding of the relationship between literacy and grammar is that many of the linguistic constructs and processes which have been generally and traditionally associated with the acquisition and use of spoken language are, in fact, not found in those who do not acquire and use literate forms of language (Scholes, 1990; 1989; Scholes and Willis, In press a; In press b; 1990; 1989; 1987a; 1987b; 1987c; Willis, 1988).

While Scholes and Willis' data base and terminology are unique, their dichotomization of grammars on intensional and extensional grounds is consistent with historical considerations of the role of writing in civilization (e.g., Goody, 1977; Gelb, 1952; McLuhan, 1962) as well as with comparisons of language and

thought in literate and non-literate contemporary cultures and language users: e.g., Luria and Vigotsky's finding that illiterate adults operate on the (Piagetian) concrete operation level (Luria, 1976) and that more primitive (read, "non-literate") forms of language show "no use of grammatical morphology" (Givon, 1979) as well as an absence of subordination (Kalmar, 1985; Chafe, 1985). See, for representative collections of work on the distinction between oral and literate cultures, Olson, Torrance and Hildyard (1985) and Kintgen, Kroll, and Rose (1988).

If the characterizations of the language of non-literates posited in this work are correct, it is entirely reasonable to hypothesize that such linguistic developments as affixation and inflection were historically associated with the introduction and use of literate forms of language.

SUMMARY AND SUGGESTIONS

Given the absence of direct evidence for pre-historical (i.e., pre-literate) stages and changes in Indo-European languages, which body of data and sets of assumptions provide the most valid characterization of our early ancestors? On the one hand we have the data of historical (i.e., literate) stages of the derivative dialects of Indo-European and the assumptions of historical linguistics to the effect that grammatical competence shows no qualitative distinctions among speakers (i.e., there are no primitive languages or - since the two are not distinguished in this work - forms of linguistic knowledge) either in diachronic or synchronic domains. In this tradition, both the formal process of affixation and the mental process of inflection are entirely

consistent with purely oral, non-literate language users. From this perspective, our Indo-European ancestors were no less capable of dealing with entirely intensional concepts than are contemporary lettered intellectuals.

On the other side of the argument, we have the data of the language and thought of contemporary pre-literate children and non-literate adults and the assumption articulated by Frazer to the effect that what is primitive in contemporary language and thought is identical to what is primitive in the phylogenetic development of culture and civilization.

Resolving this conflict will necessarily involve: a) an appraisal (or, better, re-appraisal) of the validity of the traditional technique of historical linguistics; b) an appraisal of the validity of the studies and descriptions of non-literate users of contemporary languages; and c) an evaluation of Frazer's assertion that characterizations of contemporary individuals and societies are proper data for the understanding of early man.

Serious and open-minded consideration of such topics will not only bring us closer to an understanding of the language and thought of our pre-literate progenitors but also to a more sophisticated grasp of the broader effects of literacy on the phylogenetic and ontogenetic development of man.

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